"The Study of the Geography of Helminths."

report presented at Conference on Dry Land Zoogeography, L'vov, 1-4 June 1957, (Izv. Ak Nauk Ser. Geog. 1958, No. 2, pp 155, Author: VORONOV, A. G.).

SOBOLEV, A. A., MOSTAVKIN, P. A. and NAYANOV, N. I.

"Nematodes of the Scrjabinoclava Sobolev Type as Mallam Parasites, and the Nature of Their Pathogenic Effect on the Host."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

The Far-Eastern State University, Vladivostok

SKRYABIN, Konstantin Ivanovich, akademik; SOBOLEV, Andrey Andreyevich, prof.;
Prinimal uchastiye IVASHKIN, V.M., doktor veterin.nauk; POPOVA, T.I.,
red.izd-ve; LAUT, V.G., tekhn.red.

[Spirurata of animals and man and the diseases caused by them.
Part 1. Spiruroidei] (Spiruraty zhivotnykh i cheloveka i
vyzyvaemye imi zabolevaniia. Pt. 1. Spiruroidei. Moskva, Izd-vo
(MIRA 16:7)
nematodologii, vol. 11). Lift più (MIRA 16:7)

GUBANOV, Nikolay Mikhaylovich; SOBOLEV, A.A., dektor biol. nauk, otv. red.;

[Helminths of commercial mammals of Yakutia] Gel'mintofauna premyslovykh mlekopitaiushchikh IAkutli. Moskva, 1zd-vo "Nauka," 1964. lt2 p. (MIRA 17:6)

SKRYABIN, K.I., adademik; SOBOLEV, A.A., prof.

[Spiruridae of animals and man and the diseases caused by them.

Part 2. Physalopteroidea.] Spiruraty zhivotnykh i cheloveka i

Part 2. Physalopteroidea. Moskva. Izd-vo "Nauka." Pt.2.

vyzy vaemye imi zabolevaniia. Moskva, Izd-vo "Nauka." Pt.2.
[Physalopteroidea] Fizalopteroidei. 1964. 333 p. (Akademiia [Physalopteroidea] Fizalopteroidei. Osnovy nematodologii, nauk SSSR. Gel'mintologicheskaia laboratoriia. Osnovy nematodologii, vol. 12)

EwT(d)/EWP(k)/EWP(1)£ 22594-00 UR/0105/65/000/006/0090/0090 SOURCE CODE: ACC NR: AP6012999 AUTHOR: Alekseyenko, G. V.; Borisenko, N. I.; Voyevodin, I. D.; Drozdov, N. G.; Krayz, A. G.; Man'kin, E. A.; Mayorets, A. I.; Nekrasov, A. M.; Nayashkov, I. S.; Pavlenko, A. S.; Rokotyan, S. S.; Sobolev, A. A.; Syromyatnikov, I. A.; Sapozhnikov, A. V.; Sarkisov, M. A.; Chernichkin, D. S.; Chertin, A. M. ORG: none TITIE: S. I. Rabinovich (on the occasion of his 60th birthday) SOURCE: Elektrichestvo, no. 6, 1965, 90 TOPIC TAGS: electric engineering personnel, electric transformer, hydroelectric power plant ABSTRACT: The chief specialist of transformer building of the Gosplan (State Planning Commission) USSR, Samuil Isaakovich Rabinovich was born in 1905 in the town of Borisoglebsk of the Voronezh Oblast'. From his student years at the Gosudarstvennyy elektromashinostroitel nyy institut (State Machine-Building Institute) he already showed interest for power transformers. In the early thirties he designed the first types of domestic Soviet 110 and 220 kV transformers; in 1939 he became the chief designer of the Moskovskiy transformatornyy zavod (Moscow Transformer factory). In 1946, he conducted the design and construction of lightning-resistant transformers; during 1949-1954, UDC: 621.314(092)Card 1/2

E 22594-60 ACC NR: AP6012999			
he headed the design of hydroelectric power state	the 400 kV transformer equipment for tion - Moscow power line; his subseque him the Lenin prize. [From 1960, he has a is also a member of the editorial be (Electricity). Orig. art. has: 1 f	nard of the	
SUB CODE: 10, 09 / SU	TH DATE: none		1 7
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RESIDENTE BEREITE BERE

PAKHALUYEV, K.M.; KOROLEV, N.M.; ZHURKIN, V.S.; SOBOLEV, A.A.

Experience in the operation of a holding furnace with uncooled hearth supports. Stal! 22 no.12:1135-1136 D '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i zavod "Krasnyy Oktyabr'."

(Furnaces, Heating)

PAKHALUYEV, K.M.; KUZOVNIKOV, A.A.; NOVIK, G.P.; BORODIN, V.P.; SOBOLEV. A.; ZUBKOVA, N.M.

Industrial operation of holding furnaces fired by natural gas for direct low-oxidation heating. Stal' 25 no.10:957-961 (MIRA 18:11)

l. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i zavod "Krasnyy Oktyabr'".

A D SCHOLEY, V V MACHEREVICH, and L N DADUSHKO

"Nevelonment of a Procedure for Determining Optimum and Maximum Allowable Operating Conditions for the Use of Receiver-Amplifier Tubes in Pulse Circuits" From Annotations of Works Completed in 1955 at the State Union Sci. Res. Tust; Min. of Radio Engineering Ind.

So: B-3,080,964

KUKEL', A.S.,; SOBOLEV, A.D.

Echinococcus of the fibula. Khirurgiia, no.11:81 N '55. (MIRA 9:6)

 Iz TSentral¹ nogo instituta gematologii i perelivaniya krovi. (FIBULA--HYDATIDS)

SOBOLEV, A. F.

Dissertation: "Traumata of the Head and Their Effect on the Mineral Composition of the Blood and Spinal Fluid." Cand Med Sci, Tashkent Medical Inst, 30 Jun 54. (Pravda Vostoka, Tashkent, 19 Jun 54)

SO: SUM 318, 23 Dec. 1954

SOBOLEV, A.F.

Bullet wound of the radix mesenterii of the small intestine.

Khirurgiia, no.11:84 N '55. (MLRA 9:6)

1. Iz Chimbayskoy rayonnoy bol'nitsy Karakalpakskoy ASSR. (MRSENTERY--WOUNDS AND INJURIES)

SOBOLEV. A.F. kand. meditsinskikh nauk

Penetrating wound of the left ventricle of the heart. Med. zhur. Uzb. no.10:75 0 '60. (MIRA 13:12)

1. Iz khirurgicheskogo otdeleniya Syrdar'inskoy rayonnoy bol'nitsy (glavnyy vrach - P.S. Yudina) Tashkentskoy oblasti.
(HEART -- WOUNDS AND INJURIES)

公司是中国特别的特别的特别的 SOURCE CODE: UR/0413/66/000/001/0094/0094 L2066 AP6005353 AUTHORS: Sobolev, A. F.; Kuznetsov, A. A.; Yefremov, A. A. ORG: none TITLE: Electronic integrator. Class 42, No. 177646 SCUPCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 94 TOPIC TAGS: electronic circuit, pulse integrator ABSTRACT: This Author Certificate presents an electronic continuous signal integrator containing an integrating capacitor. To increase the integration accuracy and the response rate, the signal is fed to the input of the pulse-amplitude converter. The output signals are fed to the input of a pulse-width converter at whose output the integrating storage capacitor is connected (see Fig. 1). Fig. 1. 1 - pulse-amplitude converter; 2 - pulse-width converter; 3 - capacitor Orig. art. has: 1 diagram. SUBM DATE: 14Aug64 UDC: 681.142.334 SUB CODE: 09/ Card 1/1

SOBOLE / A.I.

"Problem of TransIENt Processes in Long Lines" Sb. Nauvh. Rabot Belorus. Politekhn. In-ta, No 46, 1954, 36-41

The coupling effect is analysed of a uniform, long line shotcircuited at the end of the voltage u = F (t) U (1-e⁻¹), where is the coefficient of voltage rise. The telegraph equation of the problem is solved by Fourier's method, taking the initial and boundary conditions under consideration. The determination of integration constants involves difficulties, due to heterogenous boundary conditions. An example of computation is given. (RZhFiz, No 11, 1955)

SCBOLE V HUHTCHIN I.

Call Nr: AF 1149769

AUTHORS:

Nesterenko, Gennadiy Nikolayevich, Sobolev, Anatoliy

Ivanovich, Sushkov, Iuriy Nikolayevich.

TITLE:

Use of atomic engines in aviation (Primeneniye

atomnykh dvigateley v aviatsii).

PUB. DATA:

Voyennoye Izdatel'stvo Ministerstva Oborony Soyuza SSR,

Moscow, 1957, 166 pp. (Series: Nauchno-Populyarnaya /

Biblioteka)

EDITOR:

Mikhaylov, V. A., Candidate of Phys.-Math. Sciences, Eng.-Col.; Pokrovskiy, G. I., consultant, Prof., Dr. of Techn. Sciences, Brig.Gen. of Eng.-Tech. Service; Novikov, M. L., consultant, Dr. of Tech. Sciences, Eng.-Col.; Tech. Ed.: Strel'nikova, M. A.; Reviser:

Tsvetkova, L. K.; Ed.: Kader, Ya. M.

PURPOSE:

The purpose of this pamphlet is to give a systematic review of the information existing literature on the use of atomic energy in aviation and rocketry. The popular presentation should make it accessible to the juvenile

Card 1/6

Use of atomic engines in aviation (Cont.) Comparison of world resources of chemical and nuclear fuels First concepts of atomic aircraft engines	22 24
Chapter II	
Chapter II	
Nuclear reactors for aircraft power plants	29
Basic characteristics of nuclear aircraft reactors and requirements set for them Basic diagram of a nuclear reactor and principal processes occurring in it Critical states of a nuclear reactor Nonsteady operation of a nuclear reactor Control of nuclear reactor Types of nuclear reactors	31 36 41 47
Card 3/6	

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Advantages of the atomic rocket engine	
Conclusion	164

AVAILABLE: Library of Congress

Card 6/6

SOBOLEV, Andrey Ivanovich; STARCHAKOVA, I.I., red.; BABICHEVA, V.V., tekhn.red.

[Trade in Leningrad; practices of retail organizations] Torgovlia v Leningrade; iz opyta raboty roznichnykh torgovykh organizatsii.

Moskva, Gos.izd-vo torg.lit-ry, 1958. 114 p. (MIRA 12:4)

(Leningrad--Retail trade)

RUTSKIY, A.I.; LEONKOV, A.M.; GEYLER, L.B.; SLEPYAN, Ya.Yu.; MOSEYEV, I.V.; SOBOLEV, A.I.; TINYAKOV, N.A.; VOLKOV, N.P.; BOTVINNIK, Ya.Ye.; BARABANOV, M.Ye.; BRAZGOVKA, V.A.; PEKELIS, G.B.; KUZOVNIKOVA, Ye.A.; KUZOVNIK, Yu.P.; SHIMKO, N.I.; PALLADIY, N.L.; KHUTSKIY, G.I.

G.I. Dobkin; obituary. Izv. vys. ucheb. zav.; energ. no.4:128 Ap '58. (Dobkin, Grigorii Izrailevich, 1892-1958) (MIRA 11:6)

CIA-RDP86-00513R001651820009-9

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31933 S/123/61/000/022/010/024 A0C4/A101

AUTHORS:

Pevzner, M.L., Sobolev, A.I.

TITLE:

Investigating the possibilities of intensifying the process of

lustrous nickel plating by ultrasonics

PERIODICAL:

Referativnyy zhurnal. Mashinostroyeniye, no. 22, 1961, 72, abstract 22B441 ("Tr. Proyektn., tekhnol. i n.-i. inta Gor'kovsk. sovnarkhoz",

1959, no. 1, 6 - 21)

TEXT: The authors present the results of investigations carried out at the Gor'kovskiy avtozavod (Gor'kiy Automobile Plant) to find out the possibilities of a practical application of ultrasonics for the intensification of metal-plating processes in baths of semi-industrial and industrial volumes. In the investigation process problems of producing a tube generator and an emitter system intended for protracted operation in the electrolyte were solved. The nickel magnetoestrictive H3J-4 (NEL-4) converter with an emitting surface of 80 x 85 mm² and a strictive H3J-4 (NEL-4) converter with an emitting surface of 80 x 85 mm² and a resonance frequency of 21.3 kilocycles was used as converter. To protect the converter from cavitation a special jacket was designed which was covered by a thin diaphragm on the emission side. Cooling water pressure and consumption in the

Card 1/3

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Investigating the possibilities ...

emitter were determined experimentally. At an intensity of the ultrasonic oscillations of 3 w/cm2, the pressure was selected equal to 5 atm, and at an intensity of 7 w/cm2 it was 10 atm. A pressure of 5 atm was selected for operation; In this case the converter surface was not destroyed by cavitation. For supplying the magnetostrictive converter the FYM -2 M (GUM-2M) generator has been developed, which in the course of the operation process was modernized. To carry out the research work concerning the application of ultrasonics in metalplating processes a special experimental production division was established including preparation, washing, nickel-plating, chrome-plating and copper-plating baths, a special generator building, a 12 v, 2,500 amp d-c generator, individual cabling to the bath coils via the thermocontroller valve, h-f voltage capling to the emitters on all baths, hydraulic emitter cooling system. Two GUM-2M generators were mounted in a special building where the control of the electric equipment of the whole section was centralized. The works were carried in baths of 7 (glass), 70, 500, 600 and 1,200 liters, lined with vinyl plastic. It is shown that the criterion of the effect of ultrasonics on the metal-plating process is the power density (approximate). At a power density of 7.6 v/1 the admissible current density is 15-20 amp/dm², at 1.3 v/1 it is 8-10 amp/dm². As a result of the investigations carried out the optimum emitter position was selected, and

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electrolyte and plating conditions in baths of 7, 70, 600, and 1,200 lives have been developed. For big bath volumes (1,200 l) and low power densities the following electrolyte composition is suggested (in g/l). NiSO₄ 7H₂O = 200,300, NaCl = 20-46, H₂BO₃ = 25-30, sodium naphthalene disulfonate 2.6-2.7.0.25.0.8, pH 47.54. The following conditions were used: power density = 1.0-3 w/liter, temperature = 45-55°C, current density = 9-12 amp/dm², plating time = 12 min, yield according to current = 96-98, plating thickness = 20 μ . There are 9 references.

N. Savina

[Abstracter's note: Complete translation]

Card 3/3

s/123/61/000/022/011/024 A004/A101

and acoustic factors on this specific defect. It is shown that the presence of Nickel-plating of large-size parts ... chlorions and naphthalene disulfonate in the electrolyte composition promotes the origination of this specific defect. An important part in its origination is also played by the direction of the ultrasonic waves. The author states a hypothesis on the nature of the mentioned specific defect. He investigated the effect of adding the surface—active OI -7 (OP-7) and OII-10 (OP10) substances to eliminate this defect. If the mentioned substances are added in the form of an aqueous solution of a concentration of 0.1 g/liter produced as a distillate at aqueous solution of a concentration of 0.1 8/11001 produced as a distributed defect 60°C, it is possible to obtain a good-quality coating without the specific defect during nickel-plating according to the approved conditions. The following electrolists is recommended. trolyte is recommended: nickel sulfate up to 350 g/l, naphthalene disulfonate-0.2-0.8 g/l, formalin - 2-5 millimeter/liter, sodium chloride - up to 40 g/l, pH = 4.6-5.5; admissible cathode current density preventing scorehing = 10 pn - +,0->.9; aumissible cavilous current usually preventing scoreming - to amp/dm2. During operation with the V3T -10 (UZT-10) generator the magnitude of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator that the capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the anode voltage on the generator of acoustic capacity can be controlled by changing the acoustic capacity can be controlled by changing the acoustic capacity can be controlled by changing the capacity can be capacity can or acoustic capacity can be controlled by changing the anode voltage on the generator tube. The following conditions are suggested: 1) electric power - 6 kw, and tube. The following conditions are suggested: 52°C, duration - 17 minutes cathode current density Dc - 6 amp/dm², temperature - 52°C, duration - 17 minutes cathode current density Dc - 6 amp/dm², temperature - 6 kw cathode current d to obtain a coating of 20 \$\mu\$. choc in this case the nickel nlating process is

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\text{D} = 8 \text{ amp/dm}^2 \text{ temperature} = \text{Residue} \text{ and } \text{ temperature} = \text{Residue} \text{ and } \text{ temperature} = \text{Residue} \text{ temperature} = \text{Residue} \text{ temperature} \text{ the nickel nlating process is } \text{ the nickel nla to obtain a coating of 20 \$\mu\$. 2) electric power - 0 kW, calmous current density

Do = 8 amp/dm², temperature - 54°C, in this case the nickel-plating process is

more economical (the bath cutruit exceeds the standard one by a factor of o) the more economical (the bath output exceeds the standard one by a factor of 2), the Card 2/3

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ACCESSION NR: AP5009997 UR/0318/65/000/003/0020/0024
AUTHORS: Ayzenshtayn, P. G.; Bulatova, I. N.; Sobolev, A. I.
TITLE: Production of sulfofresol with ultrasonics
SOURCE: Neftepererabotka i neftekhimiya, no. 3, 1965, 20-24
TOPIC TAGS: ultrasonics, lubricant, coolant, organic synthesis
ABSTRACT: Sulfofresol is one of the most important lubricant-coolant fluids used in the treatment of metals. The chief supplier is the Gor'kovskiy neftemaslozavo
im. 26 Bakinskikh komissarov (Gorkiy Petroleum-oil Plant). The technology for
producing it was set up in 1935 and has remained essentially unchanged. Sulfo-
fresol is obtained by mixing medium-viscosity mineral oils with a so-called sulfured base at 110-1200. It is produced in nigrol heated to 1200 with addition
of elemental sulfur during careful stirring. The temperature in the vat is then
raised to 165C, and this temperature is held for 10-12 hours. The process is
long and tedious, so to simplify the production of sulfofresol the authors inves-
tigated the possibility of using ultrasonics. An ultrasonic head was submerged in a column of the liquid mix and hydrodynamic currents were generated by means
 of a disk. The general procedure was to dissolve elemental sulfur (10-12%)

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L 526]4-65 ACCESSION NR: AP5009997 in nigrol at 1300, with careful stirring. After complete solution, the nigrol and dissolved sulfur were mixed with distillate, heated to 1300 again, and subjected to ultrasonic radiation. High-quality sulfofresol was obtained in this way. Samples were obtained at different periods of ultrasonic radiation, and the properties of the resulting material were determined. All tests indicate that the sulfoffesol obtained by the new technique has cutting-coolant properties equivalent to that obtained by the old, and the stability is equally good. Orig. art. has: 3 figures and 4 tables. ASSOCIATION: Gor'kovskiy neftemaslozavod im. 26 Bakinskikh komissarov (Gorkiy Petroleum-Oil Plant) SUB CODE: PP. M. ?? SUBMITTED: 00 OTHER: 000 NO REF SOV: 000

CIA-RDP86-00513R001651820009-9 "APPROVED FOR RELEASE: 08/25/2000

SOURCE CODE: UR/0413/67/000/003/0039/0039 AP7009066 ACC NR:

Sobolev, A. I.; Modestov, L. A.; Kotov, Yu. A. INVENTOR:

ORG: None

TITLE: An SHF frequency divider. Class 21, No. 190943

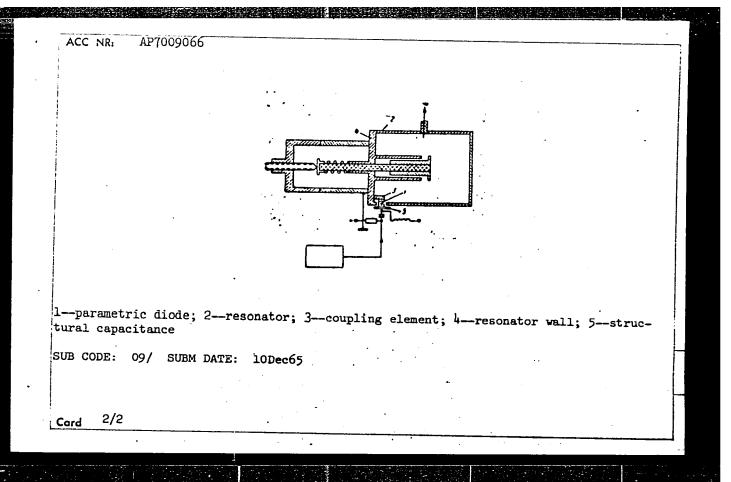
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 39

TOPIC TAGS: SHF, frequency divider, semiconductor diode, resonator

ABSTRACT: This Author's Certificate introduces an SHF frequency divider based on a parametric diode and coaxial resonator. To increase the multiplication factor with isolation of the working harmonic and simultaneous suppression of other harmonics, the parametric diode is adjusted for partial triggering of the PN junction and connected at the antinode of the current from a high-Q resonator, connected through a coupling element to the short-circuited wall of this resonator and shunted by a capacitor.

UDC; 621.375.93

CIA-RDP86-00513R001651820009-9" APPROVED FOR RELEASE: 08/25/2000



SOBOLEV, A.I., kand.tekhn.nauk, dotsent; KASPEROVICH, A.S., kand.tekhn.nauk; STANISHEVSKIY, V.N., inzh.

Concerning P.M.Vaintrub's article "Generalized interpretation of the principal relationships in an oscillatory circuit." Izv.vys.ucheb. zav.; energ. 5 no.5:123-124 My '62. (MIRA 15:5)

1. Kafedra elektrotekhniki Belorusskogo politekhnicheskogo instituta (for Sobolev). 2. Energeticheskiy institut AN BSSR (for Kasperovich, Stanishevskiy). (Electric circuits) (Electric networks)

.710 5/136/62/000/003/002/008 E194/E435

18.3100

AUTHOR:

A method of continuously measuring and recording

TITLE: back emf

PERIODICAL: Tsvetnyye metally, no.3, 1962, 53-55

In the electrolytic refining of metals a knowledge and continuous control of the decomposition voltage, or back-emf, Existing methods of determining the back-emf are discontinuous, require interruption of the process and are Accordingly, the author, O.N.Malkov, A.I.Surakov and V.A.Pronin have developed a method of continuously measuring and recording the back-emf of a laboratory electrolytic rather inaccurate. cell without disturbing the process (Author's certificate no.131420, priority date December 3, 1959). In the case of pure direct current, the voltage on the electrodes of an electrolytic cell may be written as follows:

where U - the voltage on the electrodes, V; I - the current, A; R - resistance of the electrolytic cell, ohms; E - back-emf, V. Card 1/3

A method of continuously ...

S/136/62/000/003/002/008 E194/E435

The multiplication and division units take the form of an electromechanical compensation circuit, whilst the subtracting device consists of an electronic differential amplifier. The computer output signal is applied to a recording voltmeter. In a prototype equipment, the error was not greater than \pm 5% and mainly depended on the accuracy of the recording instrument and on the linearity and stability of the amplifier characteristics. There are 2 figures.

Card 3/3

Infrared polarization microscope

S/032/62/028/006/024/025 B117/B101

eye through a tubus and be recorded on photographic plates by means of an accessory photographic device. Long period tests of this microscope showed that its resolving power at 50 magnification is sufficient for observing and photographing 3-4 mm thickness of silicon monocrystal plates under ordinary as well as polarized infrared light. Electron-optical multistage transformers of higher sensitivity must be used for investigating thicker plates. There is 1 figure.

ABSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut redkometallicheskoy promyshlennosti (State Scientific Research Institute of the Rare Metals Industry)

Card 2/2

ACC NR: AP6034236

>√ *y* so

SOURCE CODE: UR/0120/66/000/005/0166/0170

AUTHOR: Sobolev, A. L.

ORG: State Scientific Research and Design Institute of the Rare Metal Industry, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti)

TITLE: Individual counting of microscopic objects with print-out of the data

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1966, 166-170

TOPIC TAGS: optic scanning, microscope, coincidence counting

ABSTRACT: The author analyzes the sources of error in the operation of an automatic microscope television scanner with a print-out mechanism, used for the detection of microscopic imperfections in semiconductors. In this scanner, a vidicon is used to scan the image of the sample located on an automatically driven stage. A typewritter carriage is synchronized to move with the scan and to print out in alphanumeric form, the density information passed from an image analyzer in the corresponding area of the paper. Thus, graphic and numeric data are combined to form a map-like representation of the sample. A pulse-width discriminator circuit makes use of pulse coincidence techniques, utilizing a delay line to select only pulses corresponding to scan intersects of a given width. The author shows that the intersects along a scan line occur in accord-

UDC: 621.374.32:5

Card 1/2

ACCESSION NR: AP4018388

S/0120/64/000/001/0183/0186

AUTHOR: Sobolev, A. L.; Sokurenko, Yu. V.

TITLE: Automatic counting of dislocations

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 183-186

TOPIC TAGS: dislocation, crystal imperfection, crystalline structure, germanium, silicon, dislocation density, particle counter, dislocation counter, automatic dislocation counter

ABSTRACT: A statistical analysis of dislocations in Ge and Si sections has revealed that an automatic count has to be based on a differential (dislocation-background contrast) principle. An automatic dislocation counter consists of a tw microscope and a counter proper. A vidicon-tube 300-line 50-frames/sec PTU-OMl industrial tw outfit is used in the apparatus. The tw camera output, via a forming unit, is applied to counter dekades. A monitoring screen with

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ACCESSION NR: AP4018388

APPENDENCE PROPERTY OF THE PRO

brightness and contrast controls is provided. The counting error is under 5%. A block diagram of the electronic circuit is described in some detail. "The authors wish to thank O. N. Malkov, N. V. Kirilin, V. A. Pronin, and A. I. Surakov for alignment of the outfit, and also A. V. Ovodova and L. V. Nabatova who took part in the statistical analysis of single-crystal specimens." Orig. art. has: 3 figures.

ASSOCIATION: Gosudarstvenny*y nauchno-issledovatel*skiy i proyektny*y institut redkometallicheskoy promy*shlennosti (State Scientific-Research and Design Institute of the Rare-Metal Industry)

SUBMITTED: 02Apr63

DATE ACQ: 18Mar64

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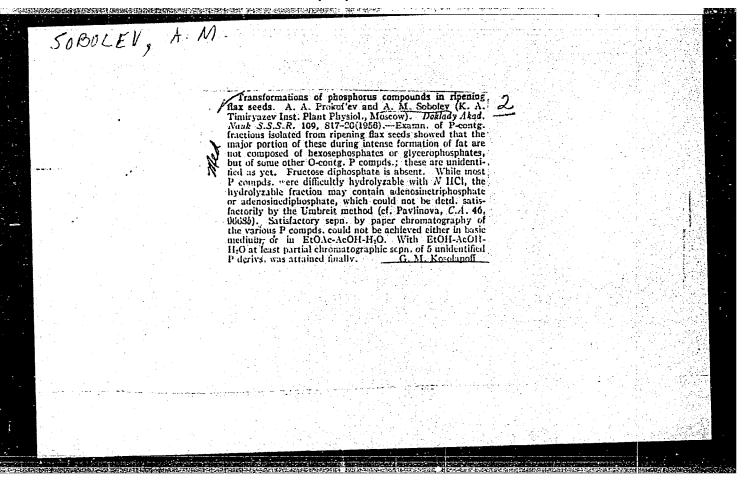
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OTHER: 006

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USSR/Plant Physiology. Mineral Nutrition

I-3

Abs Jour : Ref Zhur - Biol., No 7, 1958, No 29397

: Prokofiev A.A., Sobolev A.M. Author

: On the Translocation of Phosphorus from Leaves in Seeds Inst Title

Orig Pub : Fiziol. rastyenii, 1957, 4, No 1, 14-23

Abstract : $\text{Na}_2\text{HP}^{32}\text{O}_{l_1}$ was introduced with the aid of vacuum-infiltration into the leaves of the sunflower plant. Radioactive P was found almost only in the basket sector which was under the given leaf. It was determined in short expositions that the predominant portion of P32 introduced in the leaf followed the trail of the leaf down with a velocity of 2 m/hour. P32 which was moving from the leaf upward was found first of all in the energetically traspirating parts of the raceme and the upper young seeds. But in the period of intensive fataccumulation the larger part of P moving to the basket was represented by organic combinations. This work was carried out in the Institute of Plant Physiology of the Academy of Sciences

of the Union of Soviet Socialist Republics.

: 1/1 Card

Inch. Plant Physiol. AS USSK

APPROVED FOR RELEASE: 08/25/2000 retab CIA-RDP86-00513R001651820009-9" USSR/Plant Physiology. Respiration and Metab CIA-RDP86-00513R001651820009-9"

Nos Jour : Ref Zhur - Biol., No 19, 1958, No 86618

: Prokof'yev A.A., Zhdanova L.P., and Sobolev A.M.

Author

: Cortain Laws of the Flow of Substances from Leaves Toward the Inst Title

Reproductive Organs

Orig Pub : Fiziol. Rastenry, 4, No 5, 425-431, 1957

Abstract: 10-20 days after flowering, Cl402 saccharose-Cl4, CH3 Cl4 00% and Na₂HP320₄ were introduced into individual leaves of

OOK and Machine of were introduced into individual tasked and "Krasnodarskiy the "Karlik Stephoy", "Scratovskiy Ranniy" and "Krasnodarskiy 5966" varieties of leaf mustard and sunflower, through

placement of solutions on leaves or their introduction by the vacuum-infiltration method, daily for a pariod of 5, 10 and 15 days. Also, the leaves were exposed for 20-minute intervals to an atmosphere with Cl402. In the leaf mustard, the upper-

tier leaves proved to be most active in nourishing the fruits and seeds. In the sunflower, regardless of the tier,

: 1/2 card

Identification of organic acid-soluble phosphorus compounds in plants by paper partition chronatography. Fiziol.rast. 6 no.2: (MIRA 12:5)

1. K.A. Timiryaev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow. (Plants-Chemical analysis) (Phosphorus metaholism) (Paper chronatography)

Distribution, formation and utilization of phytin in higher plants. Usp. biol. khim. 4:248-261 | 62. (MIRA 15:7)

(PHYTIN)

SOBOLEV, A.M.

Enzymatic hydrolysis of phytin in vitro and in germinating seeds.

Fiziol. rast. 9 no.3:334-341 '62. (MIRA 15:11)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

(Phytin) (Phosphatase)

Paper chromatography of inositol phosphates. Fizio. rast. 9 no.5:

(MIRA 15:10)
649-651 162.

1. Timiryazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

(Paper chromatography) (Inositol phosphates)

SOBOLEV, A.M.

Formation and accumulation of phytin in seeds. Fiziol.

rast. 11 no.1:106-111 Ja-F 64. (MIRA 17:2)

l. Institut fiziologii rasteniy imeni K.A. Timiryazeva.

SOROLEV, A.M.

Territorial ecological schemes as a basis for the coordination of the studies of land forms. Nauk zap. L'viv. un. 40:100-102 '57. the studies of land forms. Nauk zap. L'viv. un. 40:100-102 (KIRA 11:6)

1.Institut geografii AN SSSR, Moskva. (Sotany--Ecology)

TITLE: Fighting Deviations of the Dimensions of Complex Castings

(Bor ba s otklemeniyami razmerov slozhnykh otlivok)

PERIODICAL: Mashinostroitel , 1958, Nr 10, pp 17 - 18 (USSR)

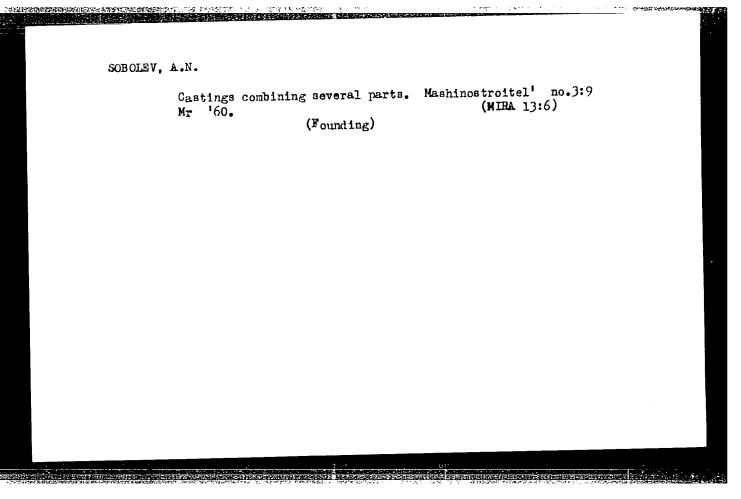
ABSTRACT: The author describes how undue amounts of waste in the

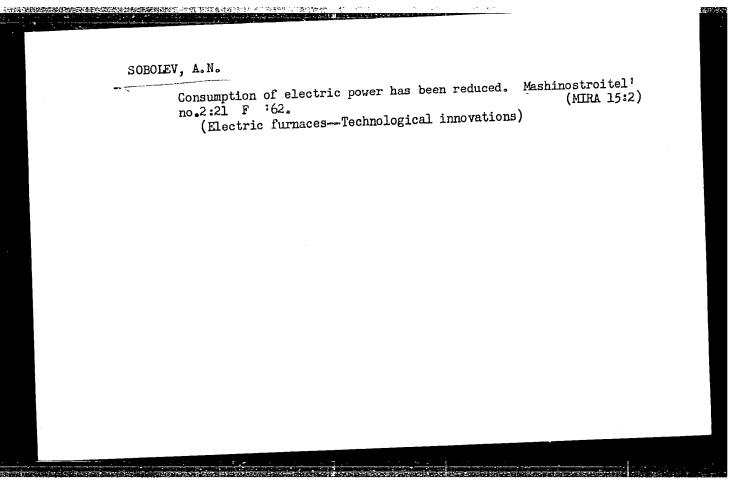
casting of complex and large dimensional parts of aluminum and magnesium AL9 and ML5 alloys caused by deviations from the given dimension can be stopped. In all cases of a production of new foundry equipment, such as models and dies, a careful marking of the equipment proper and the first batch of castings is done. The technological office of the foundry must mechanically inspect some of the castings of the first batch, a good method of confirming the true dimensions desired. If the parts are elements of assemblies to be done for other plants, a tentative mounting of samples of the first batch will be another valuable thecking means. There are 2 sets of diagrams.

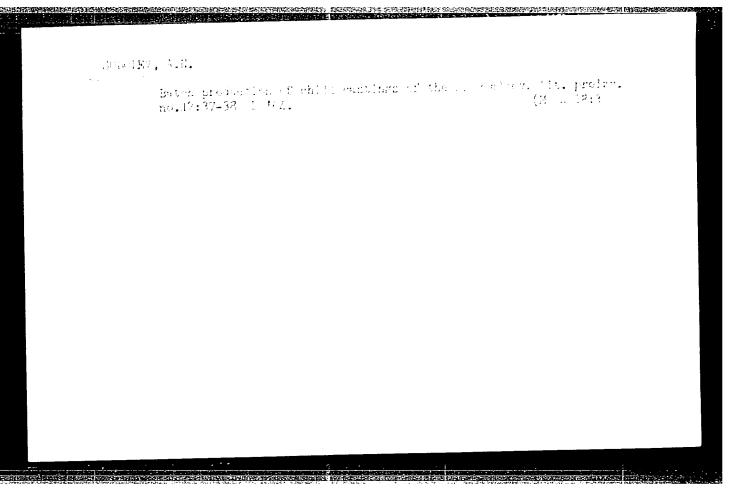
L. Alterinum castings -- Quality control 2. Magnesium castings

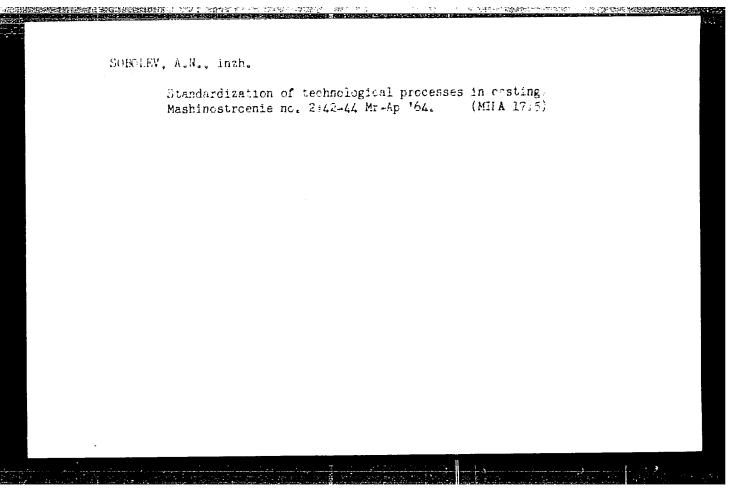
---Quality control

Card 1/1









L 23338-65 EPR/EWT(m)/EWP(b)/EWA(d)/EWP(t) Ps-4 IJP(c) MJW/JD ACCESSION NR: AP5001338 S/0128/64/000/012/0037/0038

AUTHOR: Sobolev. A. N. (Engineer)

TITLE: Serial production of chill-mold castings of AL19 alloy

SOURCE: Liteynoye proizvodstvo, no. 12, 1964, 37-38

TOPIC TAGS: chill mold casting, aluminum alloy, chill mold, aluminum casting/alloy AL19

ABSTRACT: • The chill-mold casting of a part (see Fig. 1 of the Enclosure) and the mold used (Fig. 2 of the Enclosure) are described. The preparation of the alloy used is also discussed. The pouring temperature of 700 ± 10C was determined experimentally and 36-47% of the metal charge was made available by the pouring system. The production rate of the piece described was increased by a factor of 3.5 and samples cut from the castings showed the following mechanical properties:

Ob = 25.4 to 31.8 kg/mm² and and and compare and and another castings showed the following mechanical properties:

Ob = 25.4 to 31.8 kg/mm² and and and another castings showed the following mechanical properties:

Ob = 25.4 to 31.8 kg/mm² and and another castings showed the following mechanical properties:

Ob = 25.4 to 31.8 kg/mm² and and another castings showed the following mechanical properties:

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Ob = 25.4 to 31.8 kg/mm² and another castings showed the following mechanical properties:

Ob = 25.4 to 31.8 kg/mm² and another castings showed the following mechanical properties:

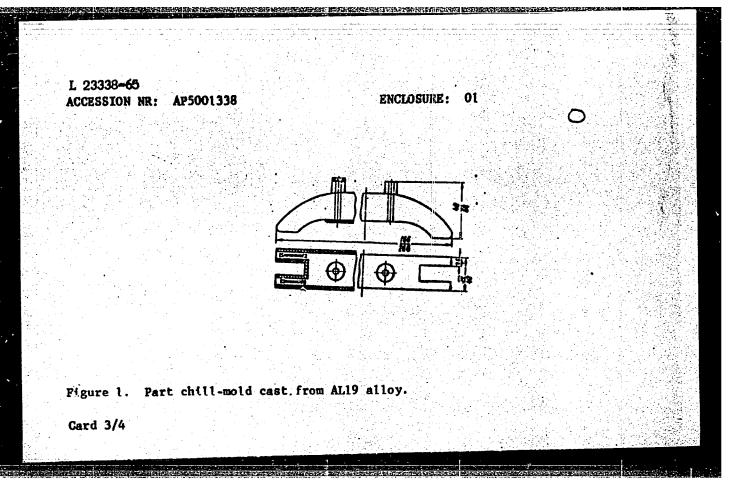
Ob = 25.4 to 31.8 kg/mm² and another castings showed the following mechanical properties:

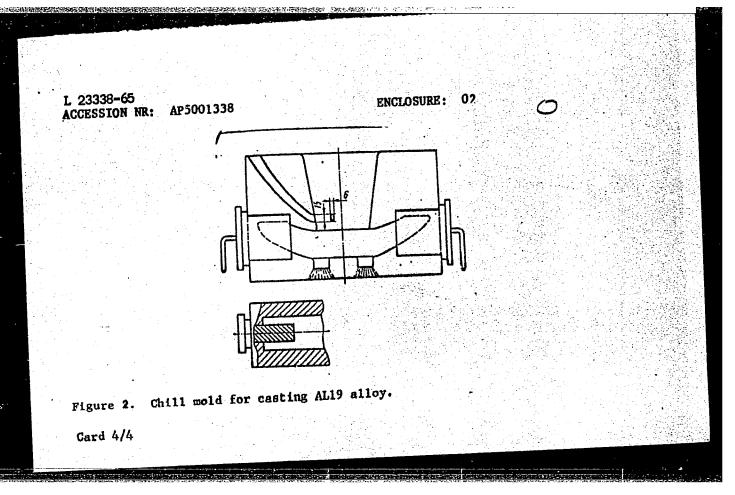
ASSOCIATION: None Card 1/4

L 23338-65
ACCESSION NR: AP5001338

SUEMITTED: 00 ENCL: 02 SUB CODE: MM

NO REF SOV: 000 OTHER: 000





BAKLUSHIN, I.L.; VEKSIN, I.N.; LYULENKOV, V.I.; SABANTSEV, V.P.; SOBOLEV, A.P.; SOKOLOV, L.D.; SHIROKOV, V.N.

Analyzing the reserve strength of the 1100 blooming mill stand in the Kuznetsk Metallurgical Combine. Izv. vys. ucheb. zav.; chern. met. 7 no.2:205-212 '64. (MIRA 17:3)

1. Sibirskiy metallurgicheskiy institut.

BOROLEV, A. F. and KRASHITHEREC, A. V.

"Soviet MacLines for Harvestin; Corm Tested", Sel'khozmashina, No. 4, 1951.

SO: W-1869, 6 Jul 1951

CIA-RDP86-00513R001651820009-9 "APPROVED FOR RELEASE: 08/25/2000

SOBOLEV, A. P. 5656. SOECIEV, A. P. Zernouborochnyye Kombayny. M., Mashgiz, 1954. 124 s. s. II. 20 sm. (V Pomoshch' Mekhanizatoram Sek'skogo Khozyaystva). 55,000 Ekz. 2r 20k-Bibliogr. v

SO: Knizhnaya, Letopis, Vol. 1, 1955

Kontse Knigi.—(55-1013) p.

. USSR Category : Soil Science. General Problems. Pb 4,-91000 100 No. 11, 205%. No.48572 Inctitute: Ivanovo Agricultural Institute : Contribution to the Problem of Studying the Fifects of Rotation Crops on Soil Properties Title lorie, St., St. neuchn. tr. Ivenovsk. e,-kh. in-te, 1956, J. May 21-34 offerences in principle are noted in approaches to studying the effects of various crops and their combined influence under the conditions of a particular rotation on soil properties and fertility. This study should not ever be made in complete isolation from the agrotechny of crop quitivation. 1/1 Card

Poventy : Soil Science. Physical and Charles.

APPROVED FOR RELEASE: 08/25/2000 · 1 GIA RDP86-00513R001651820009-9" Abs. Jong.

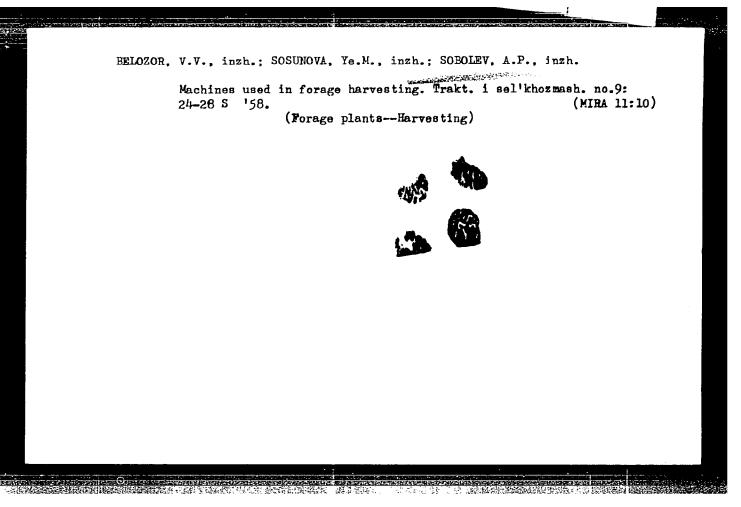
Author : Sobolav, A.P. Institute : Ivanovo Apricultural Institute The Effect of Grass-land Rotation Crops on Soil Structure Dynamic during Vegetation

Mille

house. who: Sb. nauchn. tr. Ivanovsk. s.-kh. in-ta, 1956, on average podzolic, dusty-argillaceous soil the

quantity of water-stable aggregates increases markedly between sowing and harvesting time. Aggregates smaller than 1 mm are formed most intensively under perennial grasses in their intensively under perennial grasses in their third year, from 7.95% in the spring to 34.22% third year, from winter wheat the quantity in the fall. Under winter wheat the against of aggregates increased from 13.89% in the spring of aggregates increased from 13.89% in

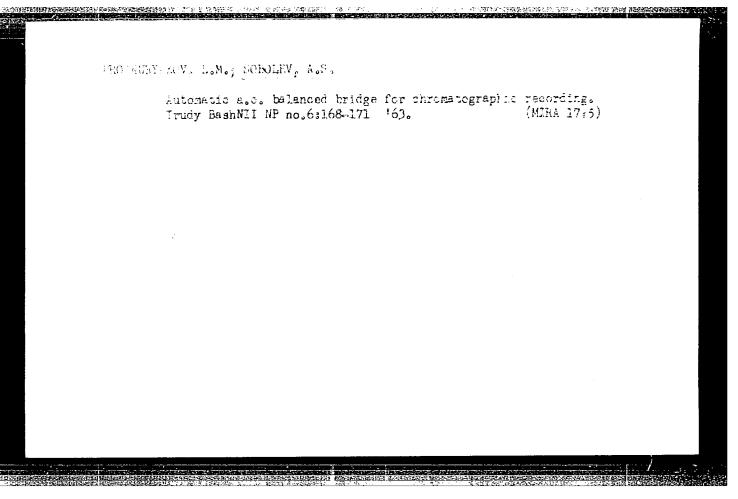
1/2 Card:

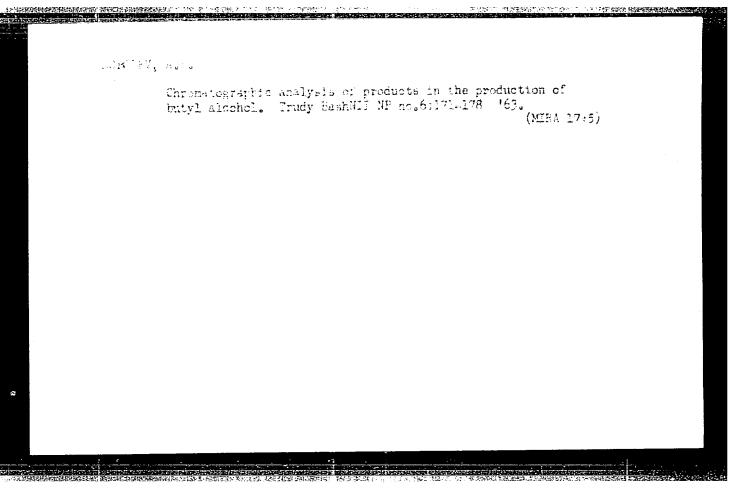


KUZNETSOV, G.M.; SOBOLEV, A.S.

Liquidus curves in binary systems of germanium and silicon.
Issl. splav. tsvet. met. no.4:94-99 '63. (MIRA 16:8)

(Germanium alloys-Thermal properties)
(Silicon alloys-Thermal properties)
(Phase rule and equilibrium)





KUZNETSOV, G.M.; SOBOLEV, A.S.

Applicability of the Meyer rule in hardness testing. Sbor.
nauch. trud. GINTSVETMET no.33:263-267 '60. (MIRA 15:3)
(Hardness--Testing)

37836

S/123/62/000/008/008/016 A004/A101

18.8700 AUTHORS:

Kuznetsov, G. M., Sobolev, A. S.

TITLE:

On the practicability of the Meyer rule during hardness tests

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 8, 1962, 27, abstract 8A201 ("Sb. nauchn. tr. In-t tsvetn. met. im. M. I. Kalinina".

1960, v. 33, 263-267)

TEXT: Investigations were carried out to determine the practicability of the Meyer rule: $P = ad^n$, where P - load, d - indentation diameter, a and <math>n - loadtest constants. The hardness was determined at room and elevated temperatures (300, 400, 450 and 500°C) on Pb, Al, Cu, bronze and brass specimens, the indenter impression duration being 0.5, 5 and 50 minutes. It was found that during hardness tests at 20°C and elevated temperatures, a deviation from the Meyer rule is taking place in the range of considerable deformation, i.e. n is no constant of the given material, but depends on the temperature, holding time and degree of deformation.

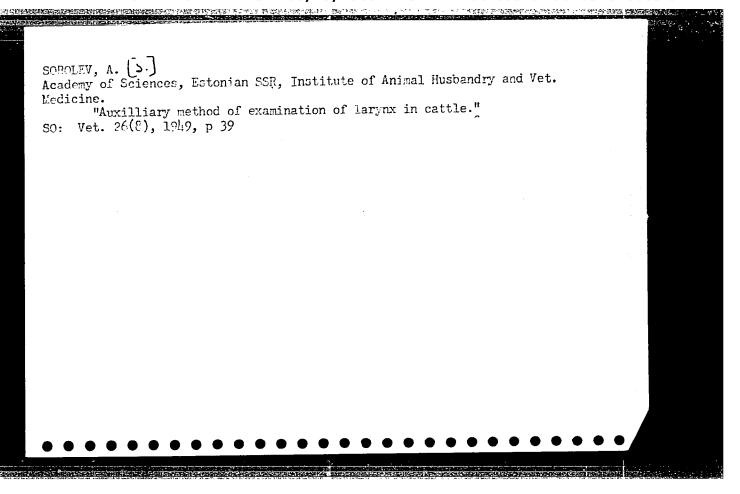
[Abstracter's note: Complete translation]

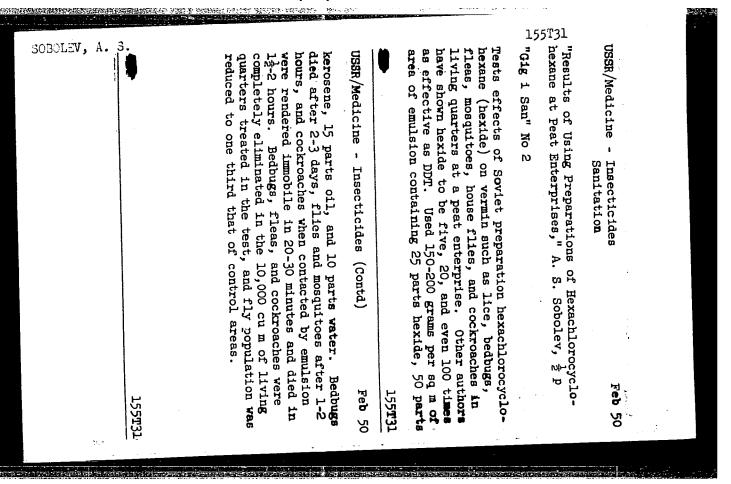
Card 1/1

SOBOLEV, Aleksey Semenovich; KAPLAN, G.D. [deceased], red.; BYKOVA,
M.G., red.; DEYEVA, V.M., tekhm. red.

[Practical manual in agricultural entomology] Praktikum po sel'skokhoziaistvennoi entomologii. Moskva, Gos. izd-vo sel'khoz.
lit-ry zhurnalov i plakatov, 1961. 325 p. (MIRA 14:8)

(Entomology)





"APPROVED FOR RELEASE: 08/25/2000

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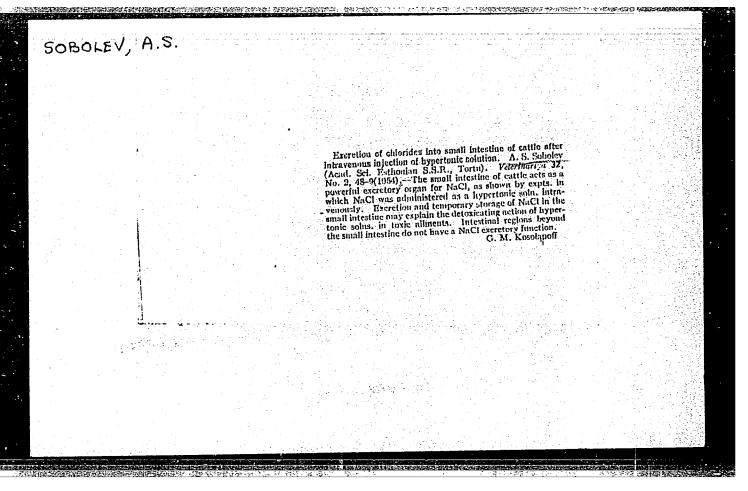
SOBOLEV, A. [5]

(From material received by the editor on Diseases of Swine)
3. "Pathogenesis and Prophylaxis of Liver Disease in Pigs" by
Senior Science Assistant A. SOBOLEV (Institute of Animal Husbandry and
Veterinary Medicine of the Academy of Science of the Estonian SSR). In
the pathogenesis of the so-called "liver disease" observed in pigs in the
the pathogenesis of the so-called "liver disease" observed in pigs in the
Estonian SSR. an important role, in the author's opinion, is played by disEstonian SSR. an important role, in the author's opinion, is played by disturbances in the mineral metabolism in the animal organism, especially a
deficiency in the iron, copper, and cobalt involved in liver functions and
blood formation. Page 56 (Veterinariya, No.9, 1952)

SO:
U-5638;10 March 1954;p.46;
de g

- 1. SOBOLEV, A. S.
- 2. USSR (600)
- 4. Salt
- 7. Salt diet of young livestock. Sots.zhiv. 15 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.



YUKHNOVICH, A.N., veter. vrach (Yel'ninskiy rayon, Smolenskoy oblasti); RUDOMETKIN, Ya.S., veter. vrach; EVENTOV, M.Z., veter. vrach; SOBOLEV, A.S., dotsent (Estonskaya SSR); DOL'NIKOV, Yu.Ya., kand. veter. nauk; PALIMPSESTOV, M.A., prof.; SIMONENKO, N.M., dotsent; GONCHAROV, A.P., assistent; BEZRUKOV, A.A.; FROLENKOV, N.A., veter. vrach (Serov, Sverdlovskoy oblasti); KOSHCHEYEV, P.M.; VOROB'YEV, M.M., kand. veter. nauk; YANCHENKO, P.Kh., veter. vrach; AMELIN, I.P.; BYCHKOV, A.I., kand, veter. nauk; SHVYREV, G.I., veter. vrach (Stavropol'skiy kray); DANILIN, N.F.; TRUSHIN, A.Z., veter. vrach; SKRYPNIKOVA, T.K., veter. felidsher; MIKHEYEV, A.D.; KARMANOVA, Ye.M., kand. biol. nauk; REMIZOV, Ye.S., mladshiy nauchnyy sotrudnik; ANTIPIN, D.N., referent

From helminthological practice. Veterinariia 38 no.7:55-58 Л 161.

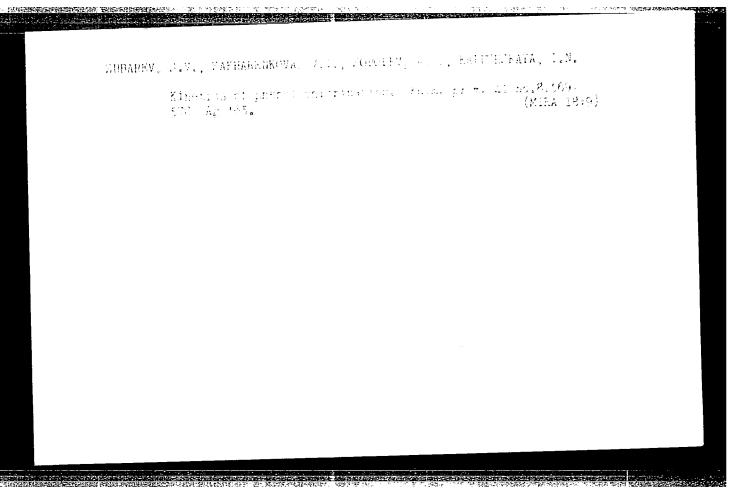
1. Reshetovskiy veterinarnyy uchastok, Novosibirskoy oblasti (for Rudometkin). 2. Sovkhoz "Buda-Koshelevskiy" Gomel'skoy oblasti (for Eventov). 3. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Dol'nikov). 4. Khar'kovskiy veterinarnyy institut (for Palimpsestov, Simonenko, Goncharov). 5. Blagoveshchenskiy sel'skokhozyaystvennyy institut (for Bezrukov). 6. Novo-Nikolayevskiy veterinarnyy uchastok Krasnodarskogo kraya (for Lochkarev). 7. Karpilovskiy veterinarnyy uchastok Chernigovskoy oblasti (for Ponomarenko). 8. Kamalinskiy veterinarnyy uchastok Krasnoyarskogo kraya (for Koshcheyev).

(continued on next card)

RACHKOVSKAYA, L.N.; SOBOLEV, A.S.; KOZIK, B.L.

Chromatographic analysis of the oxidation products of n-butylenes. Trudy BashNII NP no.7:137-141 '64.

(MIRA 17:9)



SKORYNII, Yuriy Vasil'yevich; SOBOLEV, A.S., nauchn. red.; DVORKINA, M., red.

[Reliability and durability of supports of movable instrument systems] Nadezhnost' i dolgovechnost' opor podvizhnykh sistem priborov. Minsk, Nauka i tekhnika, 1965. 110 p. (MIRA 19:1)

KURANOVA, P.Z.; LARIONOVA, Ye.S.; PLOTNIKOV, P.M.; PUMPYANSKIY, A.Ya.; SOBETS, L.P.; SOBOLEV, A.T.; ILIINSKIY, N.A., spetsred.; SHCHERBAKOVA, G.V., red.; YAROV, E.M., tekhn.red.

[Mechanized assembly-line production of sweet rusk; experience of the Leningrad Port Mechanical Bakery] Mekhanizirovannoe potochnoe proizvodstvo sdobnykh sukharei; opyt Leningradskogo Portovogo khlebozavoda. Moskva, Pishchepromizdat, 1956. 31 p. (MIRA 11:12)

1. Moscov. Vsesoyuznyy nauchno-issledovatel'skiy institut khlebopekarnoy promyshlennosti. (Leningrad--Bakers and bakeries--Equipment and supplies)

SOBOLEV, A.V. (Leningrad)

Changes in electrocardiography in remote periods after total or partial excision of the lung. Report No.2. Klin.med. 37 (MIRA 12:11) no.8:67-73 Ag '59.

1. Iz Leningradskogo nauchno-issledovatel skogo instituta ekspertizy trudosposobnosti i trudoustroystva invalidov.

(PNEUMONECTOMY)

(ELECTROCARDIOGRAPHY)

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[W. Alilli], % J. a. Trudj 3 ol. jau. :	nd <u>dolchál</u> , A. V. Mún dectain listle-snoch patholocácal seflem es", 184. lista, Jos. 11, 1946, p. 252-55.	
954 - 8⊑13931 39 An	n ust 55, (L-topis "Zhurnal "mokh Daler", No. 32, 1949).	
30.		

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SOBOLEV, A.V., kandidat meditsinskikh nauk; DEYTER, A.I.

Multiple otogenous subdural and intracerebral abscesses. Vest. otorin. 16 no.4:42-46 J1-Ag '54.

1. Iz kliniki bolezney ukha, gorla i nosa (zav. prof. N.N.Usol'tsev)
Smolenskoy oblastnoy klinicheskoy bol'nitsy.

(BRAIN, abscess,

*multiple, otogenous)

(ABSCESS,

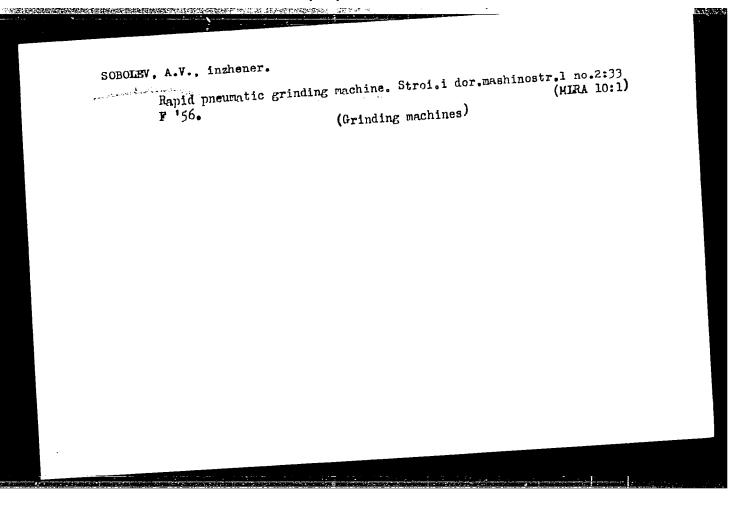
*brain, multiple, otogenous)
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SOBOLEV, A.V., BUDNIKOV, N.YE
Engineer
"Tangential bending of welded structures," Avtogen. Delo, No.7, 1949.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651820009-9"

Our experience in founding by means of cast models. Stroin dor. mashinostroin no.1:34-35 Ja '56.

(Founding)

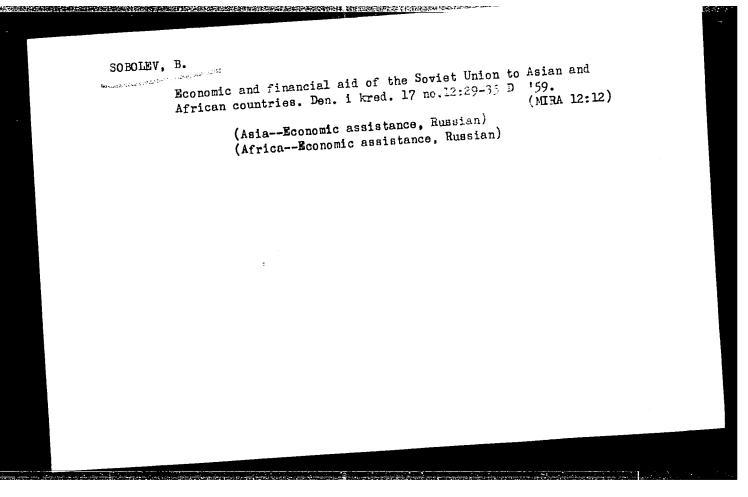


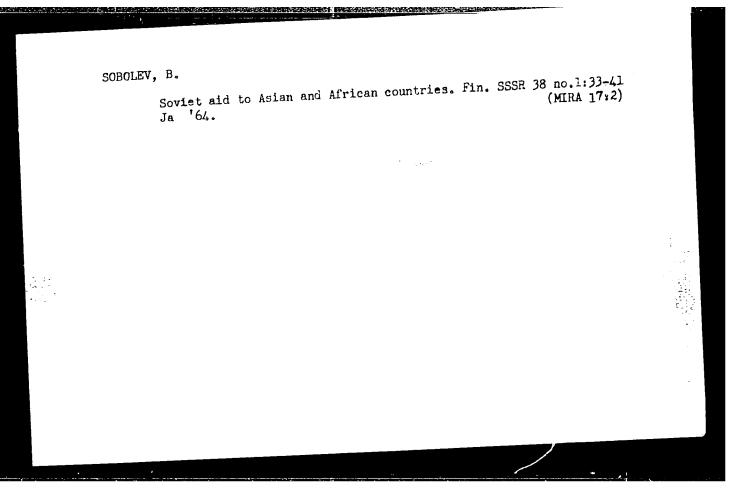
SOBOLEV, A.V., inzhener; SITNICHENKO, A.I., inshener.

Increasing the heat resistance of meld bexes and carburizing bexes.

Strei. i der.mashinestr. ne.7:29-30 J1 '56. (MIRA 9:10)

(Founding) (Cementation (Metallurgy))





SOBOLEV, B.A.; GOL'DBERG, D.O.

Two-stage deasphaltization of goudrons from sulfur-bearing crude oils. Khim. i tekh. topl. i masel 8 no.5:8-12 My '63. (MIRA 16:8)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, i Ufimskiy neftepererabatyvayushchiy zavod im. XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza.

AKEMOV, V.S.; SOBOLEV, B.A.; SUSHKO, L.G.

Redistribution of the feed of a solvent and recirculation filtrate in the dewaxing of raffinate. Nefteper. i neftekhim. (MIRA 17:5) no. 4:14-17 164.

l. Ufimskiy neftepererabatyvayushchiy zavod im. XXII s"yezda Kommunistichuskey partii Sovetskogo Seyuza.

L 3903-66 EWT(m)/EPF(c)/T ACCESSION NR: AP5023505 UR/0318/65/000/008/0023/0026 665.546.5.002.235.012.5 AUTHOR: Sobolev, B. A.; Nedogrey, P. M.; Tsalik, I. L. TITLE: Increasing the yield of lubricating oil by means of recovering of secondary SOURCE: Neftepererabotka i neftekhimiya, no. 8, 1965, 23-26 TOPIC TAGS: lubricant refining, lubricating oil, lubricant property, lubricant ABSTRACT: A method of increasing the yield of automotive lubricating oil from a commercial extract was developed. The 8-10% yield of secondary raffinate (based on deasphalted oil) can be achieved by means of refrigerating the phenol extract · 10°C below the lowest operating temperature of the commercial extraction column along with adding 2-10% of fresh phenolated water solvent. When this secondary raffinate is recycled to the extraction column the overall increase in raffinate yield is 4-5%. When the yield of secondary raffinate is kept within 8-10% range there is no detrimental effect on the quality of the total raffinate. For yields Card 1/2

APRIOVED FOR RELEASE: 08/25/2000

SOBOLEV, B.I., mayor meditsinskoy sluzhby

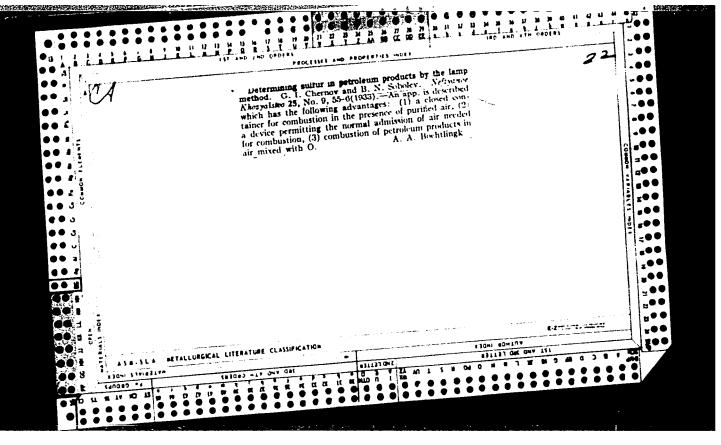
Organizing a dysentery section at a garrison hospital, Voen.-med.

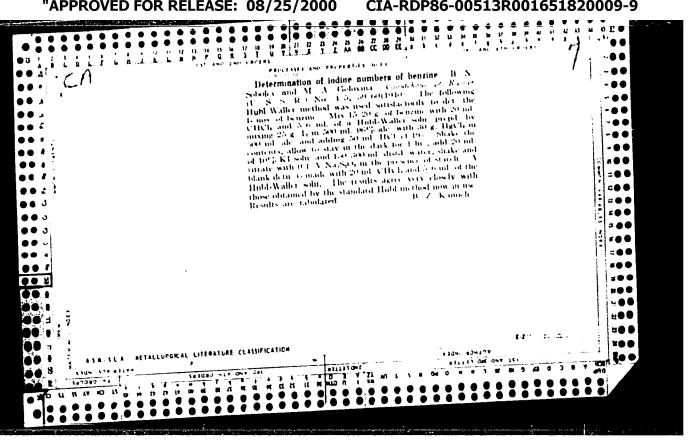
(MIRA 13:3)

zhur. no.10:71-75 0 '59.

(DYSENTERY)

(HOSPITALS, MILITARY)





SOBOLEV, B.N.; KOSTRIKIN, Yu.M., kand.tekhn.nauk; MAN'KINA, N.N., kand. tekhn.nauk

Reaction of hydrazine with iron oxides. Teploenergetika 7 no.6: 92 Je '60. (MIRA 13:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.
(Hydrasine) (Iron oxides)

Man'Kina, N.N., kand.tekhn.nauk; SOBOLEV, B.N., tekhnik

Mechanism of the hydrazine effect on the process of ferric oxide scale formation. Teploenergetika 9 no.3:48-50 Mr '62.

(MIRA 15:2)

1. Vsesoyuznyy teplotekhnicheskiy institut.

(Boilers--Incrustations) (Hydrazine)

3(8) SOV/7-59-1-3/14

IMPHORS: Sobolev, B. P., Novoselova, A. V.

TITLE: On the Role of Fluoride Compounds in the Transport of Beryllium

and the Formation of Phenacite (O roll ftoristykh soyadineniy

v perenose berilliya i obrazovanii fenakita)

PERIODICAL: Geokhimiya, 1959, Nr 1, pp 20-28 (USSR)

ADSTRACT: The authors synthesized phenacite from beryllium - and silicon

oxide. The following materials served as mineralizers: TaF, BeF, and the fluoberyllates of alkalis. The latter

preparations were supplied by M. S. Tamm and L. M. Mikheyeva. A corefully produced mixture was sealed in quartz ampoules (Figs 2 and 3) and heated in shaft furnaces. The temperature regulators ERM-47 and EPD-17 were used in this process. Experiments at different temperatures and with different minoralizers (Tables 1 to 3) gave the following results: the formation of phenacite from BeO and SiO₂ in the presence of fluoberyllates

is a heterogeneous reaction, i.e. via the gaseous state. The

Authors assume the following mode of formation:
(1) SiO₂ + 2 MaBeF₃ SiF₄ + 2 MeO + 2 MaF

Card 1/2

On the Role of Fluorite Compounds in the Transport of Beryllium and the Formation of Phenacite

(2)
$$SiF_4 + BeO \implies SiOF_2 + BeF_2$$

Because of the transport reactions phenacite can be "over-listilled". The paragenesis of phenacite in the various deposits and the morphological similarity of synthetic and natural crystals (Figs 4 to 7) suggest that fluoberyllates play a leading part in the endogeneous formation of phenacite. The authors express their gratitude to A. A. Beus for reviewing the results. There are 7 figures, 3 tables, and 25 references, 11 of which the Soviet.

ASSOCIATION: Maredra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair ef Inorganic Chemistry of Moscow State University imeni M.V. Lomonosov)

SUBMITTED: September 24, 1958

Card 2/2

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s/078/60/005/010/012/021 B004/B067

AUTHORS:

Sobolev, B. P., Klyagina, I. P.

TITLE:

Synthesis and Investigation of Single Crystals of the

Luminophore (Zn, Be) 2SiO4

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10,

pp. 2294-2299

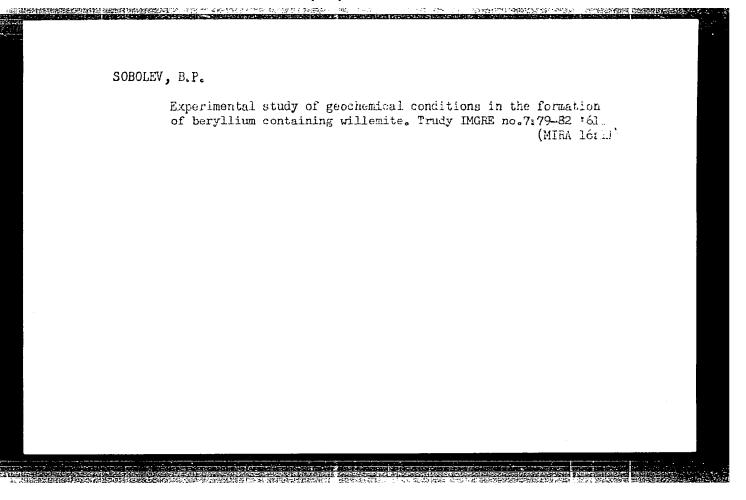
TEXT: In an earlier paper (Ref. 2), the authors observed and described "transportation effects" in the synthesis of Be2SiO4 from BeO and SiO2 by means of fluorine containing mineralizers. Single crystals of Be2Si04V were formed from the gaseous phase. The same effect was used in the present work. Single crystals of (Zn.Be)₂SiO₄ were crystallized from the gaseous phase of the system ZnO - BeO - SiO₂ - mineralizer at 1200°C. Table 1 gives the results of preliminary experiments made for determining appropriate mineralizers. The synthesis of willemite with the addition of NaF, BeF2. and Na2BeF4 is studied, and the latter compound was found to be suited for further experiments, A mixture of ZnO and BeO at a molar ratio

Card 1/3

Synthesis and Investigation of Single Crystals S/078/60/005/010/012/021 of the Luminophore (Zn,Be)2SiO4 S/078/60/005/010/012/021

of 0.5 : 1 to 3 : 1 as well as of SiO_2 and 3 - 5% Na_2BeF_4 were heated to 1200°C (Table 2). A reaction mass and a "sublimate" were formed, which at distances from 5 - 8 cm formed up to 6 mm long single crystals on the cold walls of the quartz ampoule (Fig.). The reaction products were studied by cptical crystal and X-ray photographic methods. The reaction mass consisted of two crystalline phases differing in their refractive indices. The phase with the smaller refractive index could be identified as phenacite, that with the higher one as a solid solution. (Zn,Be)2SiO4, which crystallized in willemite structure. A comparison was made between natural willemite supplied by the Mineralogicheskiy muzey Akademii nauk SSSR (Mineralogical Museum of the Academy of Sciences USSR) and willemite synthesized from ZnO and SiO2. The composition of the "sublimate" depended on the ratio ZnO: BeO. Phenacite was formed at ZnO: BeO = 0.5: 1 to 2 : 1. At ZnO : BeO = 3 : 1, the crystals consisted of $(ZnO,BeO)_2SiO_4$. Table 3 gives the roentgenographically determined lattice constants. The values $a_0 = 13.80 \text{ kX}$, $c_0 = 9.24 \text{ kX}$ were obtained for the unit cell. Willemite synthesized from ZnO and SiO_2 had the values $a_0 = 13.92$ kX,

Card 2/3



S/078/61/006/001/014/019 B017/B054

AUTHORS:

Novoselova. A. V., Babin, V. N., Sobolev, B. P.

TITLE:

Synthesis of Monocrystal Luminophores Zn2SiO4/Mn and

 $(Zn, Be)_2SiO_4/Mn$

PERIODICAL

Zhurnal necrganicheskoy khimii, 1961, Vol. 6, No. 1,

pp. 227 - 228

TEXT: The authors developed a new method of synthesizing monocrystals of the luminophores $(Zn,Be)_2SiO_4/Mn$ and Zn_2SiO_4/Mn . Silicon, beryllium, and zinc oxides were used as initial materials, and lithium zinc fluoride as mineralizer. Manganese in the form of MnF_2 was added as activating component. The component ratio of ZnO: BeO: SiO_2 was 3:1:2. The mineralizer $LiZnF_3$ was added in an amount of 5%, and the activator MnF_2 in an amount of 1% (% by weight of the oxide mixture). The monocrystals were investigated by their luminescence and by X-ray analyses. Fig.1 shows the luminescence spectra taken with the $Y\Phi C-2$ (UFS-2) ultraviolet filter of Card i/2